

Title (en)

Apparatus and method for measuring concentrations of gas components

Title (de)

Verfahren und Vorrichtung zur Bestimmung der Konzentration von Gaskomponenten

Title (fr)

Procédé et appareil de mesure de la concentration des composants d'un gaz

Publication

EP 0709668 A3 19970910 (EN)

Application

EP 95307510 A 19951023

Priority

JP 25810994 A 19941024

Abstract (en)

[origin: EP0709668A2] An oxide semiconductor element (8) is arranged in a measuring space (17) in which an atmosphere is introduced. The resistance of the oxide semiconductor element varies corresponding to a concentration of a specific gas component. An oxygen pump, having a solid-electrolyte element (11) with an oxygen ion transmitting property and a pair of electrodes (12,13) arranged on both sides of the solid-electrolyte element is provided. One electrode (12) of the oxygen pump is arranged in the measuring space. The measuring space communicates with the atmosphere through a hole (3) as a gas diffusion means. The resistance of the oxide semiconductor element is measured when the oxide semiconductor element is exposed in the atmosphere so as to obtain a concentration of a specific gas component, while the oxygen partial pressure in the measuring room is controlled by the oxygen pump. <IMAGE>

IPC 1-7

G01N 27/12; **G01N 27/41**

IPC 8 full level

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CPC (source: EP US)

G01N 27/4074 (2013.01 - EP US); **G01N 27/419** (2013.01 - EP US); **G01N 33/0013** (2013.01 - EP US)

Citation (search report)

- [X] EP 0517364 A2 19921209 - FORD MOTOR CO [GB], et al
- [X] PATENT ABSTRACTS OF JAPAN vol. 009, no. 054 (P - 340) 8 March 1985 (1985-03-08)
- [X] PATENT ABSTRACTS OF JAPAN vol. 010, no. 102 (P - 448) 18 April 1986 (1986-04-18)

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EP1217361A3; EP0949505A3; EP0952447A1; WO2011000584A1

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EP 0709668 A2 19960501; **EP 0709668 A3 19970910**; **EP 0709668 B1 20020109**; DE 69524919 D1 20020214; DE 69524919 T2 20020822; JP H08122287 A 19960517; US 5602326 A 19970211

DOCDB simple family (application)

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